

What is claimed is:

1. A method for the lane allocation of consecutive vehicles on multi-lane roads, wherein the lane allocation is carried out in a model-based manner via a frequency distribution of the lateral displacements of detected radar objects.
2. A device for implementing the method as recited in Claim 1, wherein the determined frequency distribution is correlated with stored models for frequency distributions of lateral displacements, lane allocation for multi-lane roads (e.g. 3 lanes) having a defined width or, alternatively, characteristic lateral displacement histograms for the different lanes used by the succeeding vehicle being used in these models (see Figure 1).
3. The device for implementing the method as recited in at least one of Claims 1 or 2, wherein the model part having the highest correlation to the determined frequency distribution is output as the lane hypothesis (number of lanes as well as the lane used by one's own vehicle).
4. A method for detecting the misalignment of a sensor on the basis of reflection, which can be used, in particular, for implementing a method as a recited in at least one of the preceding claims, wherein the horizontal misalignment can be detected from the position of the average values for the lanes in a histogram with respect to the vehicle axis.
5. A device for implementing the method as recited in Claim 4, wherein, in addition to a histogram for the lateral displacement  $dyv$  or, alternatively,  $dyc$ , a further histogram for the distance of the observed object can be stored with equivalent object treatment, and a misalignment angle can be determined by determining the centroid of the histograms.